3M

Dynatel™ 2210 Cable Locator

Operators Manual

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3M™ Dynatel™ 2210
Cable Locator

Operators Manual

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Table of Contents

Introduction 1
Installing or Replacing the Batteries 1
Initial Receiver Configuration 1
Receiver Battery Test 2
Transmitter Battery Test 2
Locating a Buried Cable 2
  Direct Connect Method 3
  Dyna-Coupler Method 4
  Induction Method 4
Locating a Buried Cable 5
  About Trace Modes 5
  Determining Cable Depth and Current 6
Locating Sheath Faults 6
Locating an Active Duct Probe (ADP) 7
Locating EMS Markers 8
Toning Aerial faults 8
Cable or Pair Identification 9
Technical Information 11
  Transmitter 11
  Receiver 11
  Environmental 11
  Physical 11
Optional Accessories 12

This manual has been prepared to provide the most important written instruction material to date for this product. It assumes a basic understanding of the commonly used terms in telephone transmission and switching.

Whenever this manual is reissued, the reason(s) for reissue will be listed here.

Comments concerning the contents or organization of this document, as well as suggestions for improvement are welcomed. Direct comments to:

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SET UP (USE ONE OF THREE METHODS)

Prepare the transmitter using one of the three following methods:

- Direct Connect
- Induction
- Dyna-Coupler

Go to **Transmitter Operation** to turn the unit on and apply tone to the cable.

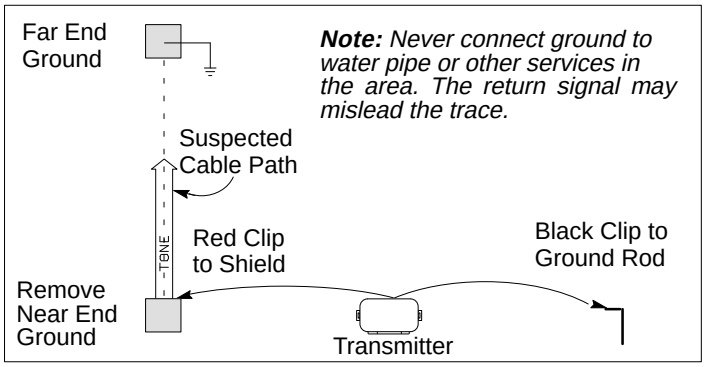
Refer to **Receiver Operation** to prepare the receiver and locate the cable.

For passive power locating, go directly to **Receiver Operation**.

Note: *For more detailed locating instructions and advanced locating techniques, ask your 3M sales representative for a publication called Cable and Pipe Locating Techniques.*

Transmitter Set Up:

- **Direct Connect Method**

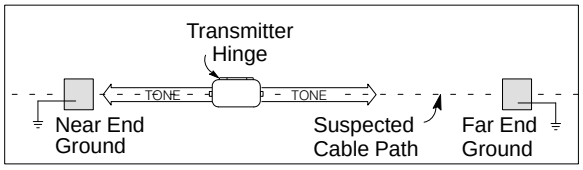


CAUTION:

Check for stray voltages before attaching transmitter. Voltage higher than 240 volts (AC/DC) damages equipment. Follow standard procedures for reducing voltage.

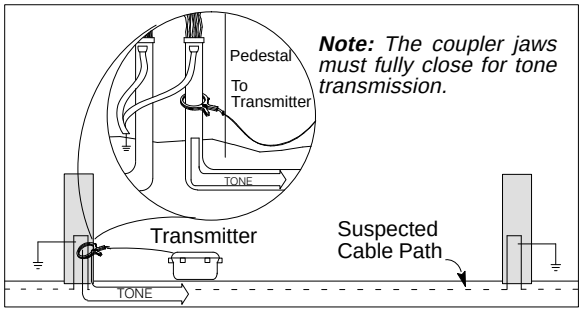
1. With the transmitter off, plug the direct connect cable into the transmitter front panel jack.
2. Connect the black clip to the ground rod.
3. Place the ground rod in the earth as far from the near end connection as the leads will allow, at a 90– degree angle to the suspected cable path.
4. Remove the near-end shield bond; connect the red clip to the shield.

- **Induction Method**



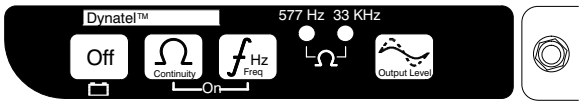
1. Place the transmitter on the ground over the target cable with the lid hinge in line with the cable path.

- **Dyna-Coupler Method**
(Optional Accessories Required)



1. Plug the Dyna-Coupler into the cable (optional accessories). Plug the cable into the transmitter front panel jack.
2. Clamp the Dyna-Coupler around the cable below any bonds just before the cable enters the earth. **Note:** Dyna-Coupler jaws must be fully closed.

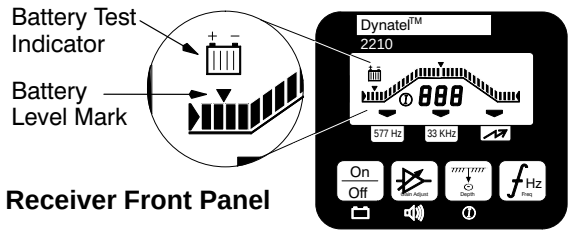
Transmitter Operation:



Transmitter Front Panel

1. Hold down Off for **Battery Test** (solid tone=good; beeping tone=low; no tone=replace batteries).
2. Press Ω to turn the unit on and select **Continuity Test** (solid tone=good ground; beeping tone= usable ground; no tone=poor ground or no far end ground). Both LEDs light continuously during the continuity test.
3. Press f to apply **Tracing Tone** and select the desired frequency: 577 Hz for direct connect with far end ground; or 33 KHz for direct connect with no far end ground, or for use with coupler, or induction. LED indicates frequency selection. (This key can also turn the unit on.)
4. Press to change output level. Choose **Normal** output (flashing LED) for locating short to moderate distances using direct connect method. Use **High** output (solid LED) for coupler, induction, or direct connect for long distance.
5. When locating is complete, press Off to turn the unit off.

Receiver Operation:



Receiver Front Panel

1. Press ⏻ to turn receiver on and see battery level. Hold down ⏻ for continuous **Battery Test**. If bar graph is to the left of the battery level mark, replace batteries. **Note:** when batteries are low, the battery test indicator 🔋 remains on.

2. Press f_{Hz} to match **Frequency** to transmitter output or select 〰 for passive power locating.

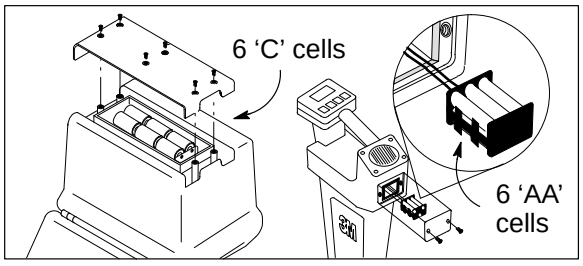
3. Press ⚡ to set **Gain** when bar graph is not visible or is closed. For **High Volume (🔊),** hold down ⚡ while turning unit on. To return to normal volume, turn unit off, then on again.

4. Make broad sweeps with receiver handle in line with target cable path to get maximum bar graph closure; press ⚡. Maximum bar graph and numeric indication occurs directly over cable.

5. Place the receiver upright on the surface directly over cable. With handle parallel to path, press ▭ to display estimated **Depth**. Press again to display numeric **Current Ⓘ** indication. Cable with highest current indication is the target. Press f_{Hz} to return to trace mode, and press ⚡. Unit returns to trace mode automatically after eight seconds.

Note: *Active Duct Probe (sonde) depth will differ from cable depth due to the shape of the electromagnetic field of the ADP. Conversion tables are provided with the ADP to obtain accurate depth estimates.*

Battery Installation



Technical Information:

Active Frequencies:	574.9 Hz and 32768 Hz (Actual)	
Passive Frequency:	50/60 Hz Power	
Battery Life:	Receiver:	84 hours, typical (Normal audio level)
	Transmitter:	50 hours, typical (Normal output)
		10 hours, typical (High output)
Recommended Batteries:	Duracell™ MN1500 AA Alkaline	
	Duracell™ MN1400 C Alkaline	
Temperature Range:	Operating:	-4°F to 122°F (-20° to 50°C)
	Storage:	-40°F to 158°F (-40° to 70° C)
	(remove batteries for long-term storage)	
Receiver Weight:	3 lbs. 14 oz. (1.75 kg)	
Transmitter Weight:	5 lbs. 9 oz. (2.52 kg)	

Optional Accessories:

3” Dyna-Coupler Kit:	3019 (includes 3” Dyna-Coupler, Cable and Accessory Pouch)
1” Dyna-Coupler:	3005
6” Dyna-Coupler:	1196 (includes 6” Dyna-Coupler and Pouch)
Active Duct Probe	3229

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